



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/758,023

01/16/2004

Tomochika Murakami

00862.023401.

6269

5514

7590

02/10/2009

FITZPATRICK CELLA HARPER & SCINTO
30 ROCKEFELLER PLAZA
NEW YORK, NY 10112

EXAMINER

ABDI, AMARA

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

02/10/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/758,023	Applicant(s) MURAKAMI ET AL.	
	Examiner Amara Abdi	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-6,13 and 17-19 is/are pending in the application.
- 4a) Of the above claim(s) 3, 7- 9, 10-12, 14-16, and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-6,13 and 17-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's response to the last office action, filed November 11, 2008 has been entered and made of record.
2. Applicant's arguments with respect to claims 1 and 13 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-6, 13, and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over wamura (US-PGPUB 2003/0012406) in view of Takao et al. (US-PGPUB 2004/0024814), and Pelly et al. (US-PGPUB 2003/0009674),

(1) Regarding claims 1 and 13:

The recitation "an image processing for generating information that allows detection of a position of tampering for an original image which is formed of first and second regions, the second region being a bit plane that consists of at least significant bits of the original image, and the first region consisting of all bit planes forming the original image other than the bit plane corresponding to the second region" has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the

Art Unit: 2624

purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Iwamura discloses an image processing method and apparatus (paragraph [0001], line 2-3), comprising:

reduction means for reducing the size of an image (paragraph [0139], lines 6-8);

binary image generation means for binarizing the reduced image to generate a binary image (paragraph [0161], lines 5-6);

watermark information generating means (process 104 in Fig. 1) for generating watermark information which contains the binary image (paragraph [0078], line 1-9) and additional information (Hash value h) (paragraph [0139], lines 1-2),

output means (302 in Fig. 3) for outputting, as an output image, an image formed by replacing an image corresponding to the second region in the original image with the encoded watermark information (paragraph [0111], line 1-3), (the embedding bits in B component of the original image is read as the same concept as replacing of the information of the second region with a watermark information).

Iwamura does not explicitly mention the reducing of height and width of an image corresponding to the first region by $\frac{1}{2}$; an error-correction encoding means for generating error-correction encoded watermark information by making error-correction

Art Unit: 2624

encoding of the watermark information by using parameter; and reconstructing means for reconstructing the error-correction encoded watermark information by varying an arrangement order of each bit which forms the error-correction encoded watermark information; wherein the parameter is determined in advance so that a size of the error-correction encoded watermark information to be generated by said error-correction encoding means is equal to or less than a size of the image corresponding to the second region.

(a) Obviousness in view of Takao et al.

Takao et al., teach the reducing of height and width of an image region by $\frac{1}{2}$ of the original image (paragraph [0048], lines 9-12).

It is desirable to easily transferring an image data at desired level to a terminal without causing a problem on a client. The Takao's approach, where reducing of height and width of an image region by $\frac{1}{2}$ of the original image is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Takao et al. teaching, where reducing the height and width of an image region by $\frac{1}{2}$ of the original image, with the Iwamura teaching, because such combination, provides an easily transferring an image data at desired level to a terminal without causing a problem on a client (paragraph [0018]).

(b) Obviousness in view of Pelly et al.

Pelly et al., in analogous environment, teaches a method and apparatus for detecting data, where the original image is formed of first and second regions (paragraph [0012], lines 10-15), and generating error-correction encoded watermark

Art Unit: 2624

information by making error-correction encoding of the watermark information by using parameter (error correction encoded bits ENC) (paragraph [0017], lines 4-8), and reconstructing the error-correction encoded watermark information by varying an arrangement order of each bit which forms the error-correction encoded watermark information (paragraph [0018], lines 3-7), wherein the parameter (error correction encoded bits ENC) is determined in advance so that a size of the error-correction encoded watermark information to be generated by said error-correction encoding means is equal to or less than a size of the image corresponding to the second region (the fed of error correction encoded bits ENC to the data expander is read as the error-correction encoding means equal to or less than a size of the image) (paragraph [0141], lines 7-10).

It is desirable to provide an improvement in copyright protection. The Pelly's approach, where generating error-correction encoded watermark information is to achieve this goal. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention, to apply the Pelly et al. teaching, where generating error-correction encoded watermark information, with the combination Iwamura and Takao et al., because such feature provide an improvement in copyright protection. The copyright protection is generally performed at a highest level to the watermarking system, so that by providing an Additional copyright protection layer on top of an existing watermarking layer, copyright protection of material can be facilitated (paragraph [0011], lines 6-11).

(2) Regarding claim 2:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 1. Furthermore, Iwamura teaches an apparatus (Iwamura: paragraph [0071], line 2-3), further comprising:

encryption means (process 201 in Fig. 2) for encrypting the watermark information generated by said watermark information generation means (Iwamura: paragraph [0086], and paragraph [0087], line 1-3), and

wherein the blocks are encrypted by said encryption means (Iwamura: paragraph [0127], line 4-6; and paragraph [0128], line 1-3), (the generating of check bits for the encrypted blocks is read as the same concept as the error-correction encoding of the watermark information).

and Pelly et al. teach the generating error-correction encoded watermark information by making error-correction encoding of the watermark information (Pelly: paragraph [0017], lines 4-8),

(3) Regarding claim 4:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 1. Furthermore, Iwamura teaches an apparatus (paragraph [0071], line 2-3), further comprising:

Hash value calculation means (Fig. 6) for calculating a Hash value using the image of the first region (Iwamura: paragraph [0139], line 1-3), (the hash value is read as an output value of the hash function), and

wherein said watermark information generation means further stores data of the

Hash value in the watermark information (Iwamura: paragraph [0101], line 5-9), (the storing of the various data by the ROM is read as the same concept as the storing of the data of the hash value by the watermark information generating means), as the additional information (Iwamura: paragraph [0295], line 1-3).

(4) Regarding claim 5:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 1. Furthermore, Iwamura discloses a bit sequence (Iwamura: paragraph [0222], line 5-6), and Pelly et al. teach the decoding of the watermark information (Pelly: 140 in Fig. 4, paragraph [0037], line 3-7).

(5) Regarding claim 6:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 5. Furthermore, Iwamura teaches an apparatus (paragraph [0071], line 2-3) where the bit sequence is a Hash value for a part of the watermark information that contains at least the feature image (Iwamura: paragraph [0139], line 1-8).

(6) Regarding claim 17:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 1. Furthermore, Iwamura teaches a program for making a computer function as an image processing apparatus of claim 1 (Iwamura: paragraph [0469], line 4-10).

(7) Regarding claim 18:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 13. Furthermore, Iwamura teaches a program for making a computer implement an image processing method of claim 13 (Iwamura: paragraph [0469], line 4-10).

(8) Regarding claim 19:

The combination Iwamura, Takao et al., and Pelly et al. teaches the parental claim 17. Furthermore, Iwamura teaches a computer readable storage medium storing a program of claim 17 (Iwamura: paragraph [0470], line 1-6).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Contact Information:

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amara Abdi whose telephone number is (571)270-1670. The examiner can normally be reached on Monday through Friday 8:00 Am to 4:00 PM E.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jingge Wu/
Supervisory Patent Examiner, Art Unit 2624

/Amara Abdi/
Examiner, Art Unit 2624